

REMARKS

Claims 1-26 and 81-89 are currently pending. Claims 1 and 14 are amended herewith. Based on the amendments and the following remarks, the Applicants respectfully request reconsideration of the Application.

Rejection under 35 U.S.C. §103 in view of *Isfeld*, *Hagsand* and *Irwin*

The Examiner rejects claims 1-6, 8-10, 12-19, 21-23, 25-26 and 81-89 under 35 U.S.C. §103(a) as being unpatentable over United States Patent No. 5,828,835 (*Isfeld*) in view of United States Patent No. 7,254,142 (*Hagsand*) and United States Patent No. 6,393,026 (*Irwin*). *Office Action*, 3. The Applicants respectfully traverse these rejections.

Claim 1 recites, among other limitations, the step of “determining a route for a unidirectional channel from a source processing node in an array of processing nodes having locations” to a destination processing node. Furthermore claim 1 has been amended to state that the locations are “on one or more integrated chips on a printed circuit board” in order to expedite prosecution. The amendment to claim 1 is supported in the present application, at least by paragraph [0034], for example.

The combination of *Isfeld*, *Hagsand*, and *Irwin* fails to render claim 1 obvious because the combination does not describe determining a route for a unidirectional channel from a source processing node in an array of processing nodes to a destination processing node, wherein the nodes have locations “on one or more integrated chips on a printed circuit board.” The Examiner correctly states that the combination of *Isfeld* and *Hagsand* does not disclose the step of “determining a route for a unidirectional channel from a source processing node to a destination processing node within the array of processor nodes” as recited in claim 1 (*Office Action*, p. 4, para. 2)

Contrary to the Examiner’s assertion, *Irwin* does not cure the deficiencies of *Isfeld* and *Hagsand* with respect to claim 1. *Irwin* merely describes a data packet processing system and method for a router which uses a packet switching software for routing data packets between data networks. See *Irwin*, col. 3, lines 62-65. Because a router that routes data packets between data networks over air is not equivalent to a method where a route is

determined for a unidirectional channel between nodes having locations “on one or more integrated chips on a printed circuit board,” *Irwin* also fails to describe the claimed feature of “determining a route for a unidirectional channel” from a source processing node in an array of processing nodes having locations “on one or more integrated chips on a printed circuit board” to a destination processing node in the array of processing nodes.

Furthermore, the Applicants respectfully disagree with the Examiner’s assertion that *Irwin* discloses the claimed feature of “generating the unidirectional channel along the determined route from the source processing node to the destination processing node.” *Irwin* discloses a data packet processing system using a ring topology, where there is bidirectional transmission of data between master nodes and slave nodes. See *Irwin*, col. 6, lines 62-65, Figs. 7-8. *Irwin* does not discuss generation of channels from a source processing node to a destination processing node at all, let alone generation of unidirectional channels. Indeed, *Irwin* seems to teach away from use of unidirectional channels by disclosing, for example, transmission paths going both east to west and west to east between processors in the ring topology. See *Irwin*, col. 3, lines 52-55 (“the locality problems in distributing the packet switch software among the multiple main processors arose in the prior art systems are avoided in the present invention since any procedure may be executed on any slave processor”), Fig. 8, col. 8, lines 29-36 (“The computing array has an east to west macro 118 and a west to east macro 120”).

For at least the reasons state above, *Isfeld*, *Hagsand*, and *Irwin* do not teach or suggest each element of claim 1. Therefore, claim 1 should be allowable over the cited art of *Isfeld*, *Hagsand*, and *Irwin*, both considered individually and in combination.

Claims 2-6, 8-10, 12, 13, 81-84, 88, and 89

Regarding claims 2-6, 8-10, 12, 13, 81-84, 88, and 89, the Applicants contend that these claims are at least patentable because they depend on an otherwise patentable independent claim, and incorporate the elements of claim 1 in addition to the distinguishing

limitations they recite. Therefore, claims 2-6, 8-10, 12, 13, 81-84, 88, and 89 are patentable over the cited references for at least the same reasons as claim 1 and should also be allowed.

Claims 14-19, 21-23, 25, 26, and 85-87

Independent claim 14 contains elements that distinguish the claimed embodiment from *Isfeld* and *Hagsand*, and *Irwin* similarly to those discussed above for claim 1. Therefore, claim 14 should be allowed for at least the same reasons as claim 1. Claims 15-19, 21-23, 25-26, and 85-87 depend from independent claim 14 and incorporate the elements of claim 14 in addition to the patentably distinguishing limitations they recite. Therefore, claims 15-19, 21-23, 25-26, and 85-87 are patentable over the cited references for at least the same reasons as claim 14 and should also be allowed.

Rejection under 35 U.S.C. §103 in view of *Isfeld*, *Hagsand*, *Irwin* and *Plante*

The Examiner rejects claims 7 and 20 under 35 U.S.C. §103(a) as being unpatentable over *Isfeld* in view of *Hagsand* in view of *Irwin* and further in view of United States Patent Publication No. 2004/0208602 (*Plante*). The Applicants contend that *Plante* fails to alleviate *Irwin's* failure to teach nodes having locations “on one or more integrated chips on a printed circuit board” and “generating the unidirectional channel along the determined route from the source processing node to the destination processing node.” Regarding claims 7 and 20, the Applicants contend that these claims are at least patentable because they depend on otherwise patentable independent claims, in addition to the distinguishing limitations they recite.

Rejection under 35 U.S.C. §103 in view of *Isfeld*, *Hagsand*, *Irwin* and *Pitts*

The Examiner rejects claims 11 and 24 under 35 U.S.C. §103(a) as being unpatentable over *Isfeld* in view of *Hagsand* in view of *Irwin* and further in view of United States Patent No. 6,505,241 (*Pitts*). The Applicants contend that *Pitts* fails to alleviate *Chuprun's* failure to teach nodes having locations “on one or more integrated chips on a printed circuit board” and “generating the unidirectional channel along the determined route from the source

processing node to the destination processing node.” Regarding claims 11 and 24, the Applicants contend that these claims are at least patentable because they depend on otherwise patentable independent claims, in addition to the distinguishing limitations they recite.

Conclusion

Based on the foregoing amendments and remarks, the Applicants request all §103 rejections to the claims be withdrawn, since *Isfeld*, *Hagsand* and *Irwin* fail to teach uni-directional data transmission between nodes, that the nodes have locations on one or more integrated chips on a printed circuit board, and a fixed array of processing nodes.

The Applicants contend that the pending claims in the present Application are in condition for allowance. If the Examiner has any questions regarding the Application, the Examiner is invited to contact the Applicants' undersigned representative.

The fee for extending the time to reply up to the current date is submitted concurrently herewith. The Commissioner is authorized to charge any underpayment or credit any overpayment to Deposit Account No. 06-0600 for any matter in connection with this response, including any fee for extension of time, which may be required.

Respectfully submitted,

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Date: January 28, 2011

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